

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Patent Application of

David H. Bessel

Application No. 09/826,198

Filed: **April 4, 2001**

For: Method and Apparatus for Legacy
Analog Video Interconnections in a
Set-Top Box for Personal Video
Recording Applications

Group Art Unit: 2611

Examiner: Christopher M.
Lambrecht

DECLARATION UNDER 37 C.F.R. § 1.132

The undersigned, being Applicant's attorney of record, hereby declares the following based on information and belief.

1. The Applicant and inventor of the above-identified patent application, David H. Bessel ("Bessel") invented the subject matter now claimed in the above-identified patent application prior to December 28, 2000, the filing date of U.S. 2004/0261112 to Hicks, III et al. ("Hicks").

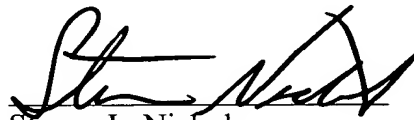
2. Bessel conceived of the invention as presently claimed and described that invention in such complete terms as to enable the preparation of the above-identified patent application at least as early as September 22, 2000.

3. Bessel created written documentation of the invention as presently claimed in the above-identified patent application at least as early as September 22, 2000. A copy of such documentation dated September 22, 2000 is attached to this declaration.

4. The attached document dated September 22, 2000 was submitted to the undersigned who, based on that document, prepared and filed the above-identified patent application in compliance with 35 U.S.C. §§ 101 and 112.

5. All statements made herein of my/own knowledge are true, all statements made herein on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001, and may jeopardize the validity of the application or any patent issuing thereon.

Respectfully submitted,



Steven L. Nichols
Registration No. 40,326

DATE: 10 June 2005

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DECLARATION UNDER 37 C.F.R. § 1.131

The undersigned, being sole inventor and Applicant of the above-identified patent application, hereby declares the following based on information and belief.

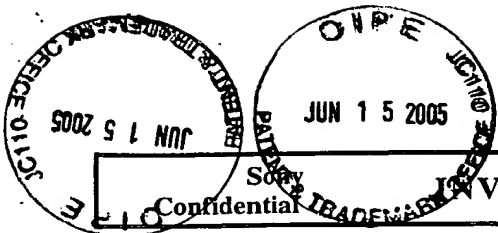
1. I, David H. Bessel, invented the subject matter now claimed in the above-identified patent application prior to December 28, 2000, the filing date of U.S. 2004/0261112 to Hicks, III et al. ("Hicks").

2. I conceived of the invention as presently claimed and described that invention in writing in such complete terms as to enable one of skill in the art to practice the invention as claimed without undue experimentation at least as early as September 22, 2000. This writing also enabled the preparation of the above-identified patent application.

3. All statements made herein of my/own knowledge are true, all statements made herein on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001, and may jeopardize the validity of the application or any patent issuing thereon.

David H. Bessel

Date



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1 of 5

INVENTION DISCLOSURE **IPD SAN DIEGO** Sony Confidential

Note: Detailed instructions for completing this form can be found in Appendix V of Sony's Patent Guide for Engineers and Inventors.

I. IDENTIFICATION

IPD Case #: 50P4377
(IPD use only)

1a. Short Descriptive Title of the Invention:
Method of legacy video interconnection in Set Top Box for Personal Video Recording Applications

1b. Short Summary of the Invention:

This discloses a method of connecting legacy video to a
cable Set Top Box (STB) to facilitate Personal Video Recording (PVR) applications..

2. Name of Responsible Patent Coordinator (if any): Deborah Hutchinson
Business Address: 16450 West Bernardo Dr. MZ 7205 / San Diego, CA 92127
Business Phone/Fax: 858-942-4170 / 858-921-9142
Business Email Address: Debbie.Hutchinson@am.sony.com

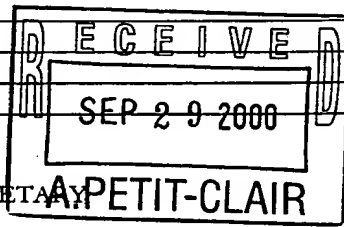
3. Identify all persons who contributed to the present invention including persons from other Sony Divisions, Sony Japan and Outside Companies. Final determination of inventorship is a legal question which will be resolved at a later time.

(1)
Full Legal Name: David H. Bessel
Home Address: P.O. Box 669, Poway, CA 92074
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Business Phone/Fax: 858-942-2646 / 858-921-9178
Business Email Address: Dave.Bessel@am.sony.com
Division / Company / Location: ATC / DCA / San Diego
☒ Sony Employee ☐ Intern ☐ Contractor/Consultant ☐ Temp. ☐ Other:

Manager's Name: David A. Desch
Business Address: 16450 West Bernardo Dr., San Diego, CA 92127, US
Business Phone/Fax: 858 942 -2784
Business Email Address: Dave.Desch@am.sony.com

(2)
Full Legal Name: _____
Home Address: _____
Citizenship: _____
Business Address (include mail drop): _____
Business Phone/Fax: _____
Business Email Address: _____
Division / Company / Location: _____
☐ Sony Employee ☐ Intern ☐ Contractor/Consultant ☐ Temp. ☐ Other :

Manager's Name: _____
Business Address: _____
Business Phone/Fax: _____
Business Email Address: _____



AEG

(3)

Full Legal Name: _____
 Home Address: _____
 Citizenship: _____ (If Japanese, please provide name in Kanji)
 Business Address (include mail drop): _____
 Business Phone/Fax: _____ / _____
 Business Email Address: _____
 Division / Company / Location: _____ / _____ / _____
☐ Sony Employee ☐ Intern ☐ Contractor/Consultant ☐ Temp. ☐ Other : _____

 Manager's Name: _____
 Business Address: _____
 Business Phone/Fax: _____ / _____
 Business Email Address: _____

(4)

Full Legal Name: _____
 Home Address: _____
 Citizenship: _____ (If Japanese, please provide name in Kanji)
 Business Address (include mail drop): _____
 Business Phone/Fax: _____ / _____
 Business Email Address: _____
 Division / Company / Location: _____ / _____ / _____
☐ Sony Employee ☐ Intern ☐ Contractor/Consultant ☐ Temp. ☐ Other : _____

 Manager's Name: _____
 Business Address: _____
 Business Phone/Fax: _____ / _____
 Business Email Address: _____

(Use Additional Inventors sheet if necessary)

II. BACKGROUND INFORMATION

- Do you believe this invention was developed while working under or in the performance of experimental, developmental or research work called for by a Government Contract or upon the understanding that a Government Contract would be awarded?
☒ NO ☐ YES
- Has your invention been disclosed to anyone outside of Sony in a speech, exhibit, presentation, product, product manual, report, lecture, trade show, technical article, publication or otherwise?
☒ NO ☐ YES
- Is this invention related to any previous Sony Invention Disclosures of which you are aware (made by you or someone else)?
☒ NO ☐ YES
- If you responded "YES" to any of questions 1-3, please explain below:

5. Name of product(s) or project(s) for which this invention was developed:

Millennium Cablevision Set Top Box (STB)

6. When do you expect a product incorporating this invention to be sold, offered for sale or shown to someone outside of Sony? (If a product or prototype has already been sold, offered for sale or shown, please identify the earliest date this happened.):

Jan 2002

7. Has a working model of the invention been built and tested (or appropriate software been written)?

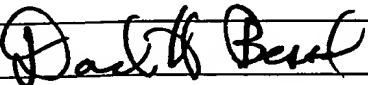
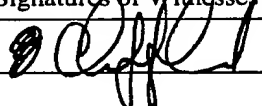
☒ NO ☐ YES: If yes, who has witnessed a demonstration, and when?

8. List below any patents, publications, articles, texts, products, etc. which describe technology similar to your invention including reference material which may be useful in understanding the background technology of your invention: (Include a copy of each item to IPD. Please include copies of all bibliographical information.)

III. DESCRIPTION OF THE INVENTION

Provide a concise technical description of your invention in the format outlined below on the following pages.

- 1: Explain the problems, issues or needs which led to the invention, and explain how others have addressed these problems, issues or needs.
- 2: Describe your invention in terms of how it solves the problems described in paragraph 1. Specifically identify the new or novel features of your invention. Describe the construction and operation of the invention including drawings (flow charts, schematics, block diagrams, mechanical drawings, photographs, etc.) You may attach documentation in the form of letters, memos, engineering notebook pages, etc. if available, or you may use as many invention disclosure data sheets as necessary. Be sure each page is signed, dated and witnessed.
- 3: If there is more than one way to implement your invention, describe the "Best Mode" or your personal preference as to how to *best* implement, build, produce, or use your invention (e.g. preferred parts, materials, techniques, etc. which you feel are best in practicing your invention). Each submitter's opinion is important here, even if there is disagreement. Please list anything you think will make the invention better in any way.
- 4: Briefly describe any alternate uses, variations or modifications of your invention, if any, which you contemplate.

| Signature of Submitter(s) | | | Read and understood by: Signatures of Witnesses (at least two witnesses preferred) | | |
|---|------|---------|---|------|---------|
|  | Date | 7 20 02 |  | Date | 8/20/02 |
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| | Date | | | Date | |
| | Date | | | Date | |

Invention Disclosure Data Sheet

Paragraph 1. Explanation of Problem

Contemporary cable Set Top Boxes (STB) are required to tune both digital and legacy analog channels. Digital channels are received in a compressed format. Analog channels are received as standard NTSC (in the US,) format. For Personal Video Recording (PVR) applications, the legacy analog video material must be converted to digital form and must be compressed prior to being recorded on a disk drive storage unit. This conversion process adds complexity to the interconnection paths within the STB. The purpose of this patent disclosure is a method for interconnection that creates less complex system organizations..

Paragraph 2. Explanation of Proposed Solution

Figure 1 illustrates a conventional method of connecting legacy, analog video from a tuner to the video presentation section and PVR hard disk drive in a STB. Analog video is routed from the tuner into a video decoder which converts it into a digital format. This digitized legacy video is then routed into the Presentation portion of the STB for active display and routed to an MPEG2 video encoder where it is compressed before being sent to the hard disk recorder. Note, that there is a separate path required for routing the original digital source video to the hard disk recorder. Both the Video Presentation unit and PCR disk must accept material from dual sources.

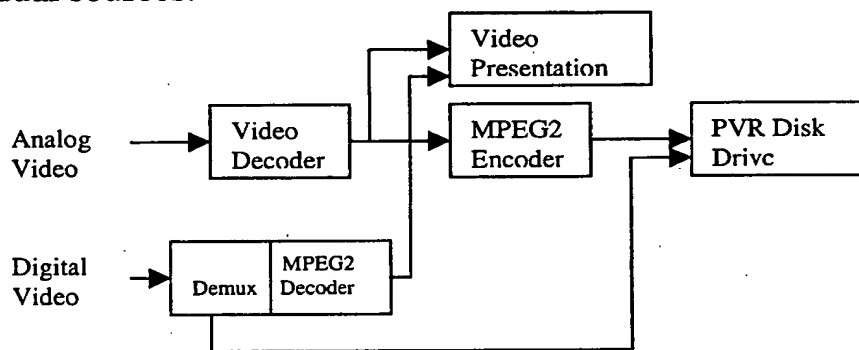


Figure 1

Figure 2 depicts the new, simplified organization. The key to this organization is that the legacy analog video is always compressed, regardless of whether it is being recorded, and then decompressed for presentation. Thus, both the legacy analog video and the digital video streams are treated exactly the same for presentation and for PVR recording activities, traveling over the same data path and a single interface to the PVR recorder. Other advantages may also exist. The dual port required in figure 1 into the PVR hard disk drive has been eliminated.

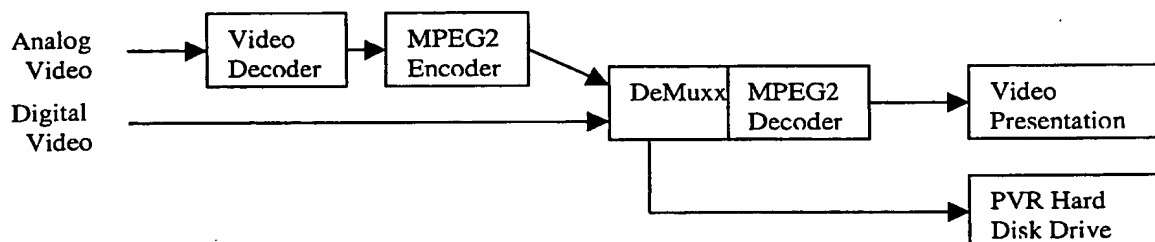
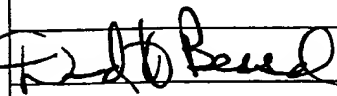
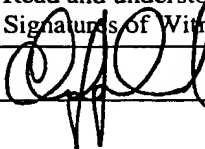


Figure 2

Paragraph 3. Preferred Implementation

There is no preferred method of implementation this organization. Implementations are dependent on other aspects of the system design and the specific components utilized.

| Signature of Submitter(s) | | | Read and understood by: Signatures of Witnesses (at least two witnesses preferred) | | |
|--|------|---------|---|------|---------|
|  | Date | 9/20/00 |  | Date | 9/20/00 |
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